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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,188	02/05/2004	Jason E. Tripard	MI22-2494	7195
21567	7590	03/13/2006	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			KALAM, ABUL	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,188

Applicant(s)

TRIPARD, JASON E. 

Examiner

Abul Kalam

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/5/2004 to 3/11/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/5/04, 6/2/04, 3/11/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledgement is made of applicant's claim for benefit, under 35 U.S.C. 120, of United States Non-provisional Application Serial No. 09/533,058 (U.S. Patent 6,718,858), filed on March 22, 2000, which resulted from a divisional application of U.S. Non-Provisional Application Serial No. 09/176479 (U.S. Patent 6,277,671), filed on October 20, 1998.

Claim Objections

1. Claims 1-7 are objected to because of minor informalities:

Claim 1 recites the limitation "the plurality of holes formed in the board" in lines 7- There is insufficient antecedent basis for this limitation in the claim. Claims 2-7 are dependent on claim 1, and thus also contain the same error.

In line 3 of claim 5, there is also insufficient antecedent basis for the limitation of "the gas." Appropriate correction of these informalities is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based

on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 4-6 and 8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No. 6,277,671.

Although the conflicting claims are not identical, they are not patentably distinct from each other because independent claims 1 and 8, and dependent claims 4-6 contain all the limitations of claim 24 of the patent.

With respect to claim 1, claim 24 has the following limitations:

A method for forming (separating) integrated circuit packages from a board having a plurality of integrated circuits, comprising:

providing a base having a plurality of pins extending upwardly therefrom;

providing a support over the base, the support having an upper planar surface and a pair of opposing ends, the support having a plurality of holes extending there-through, the pins extending through the holes and upwardly beyond the upper planar surface of the support;

placing the board over the support upper planar surface, the pins extending into the holes in the board (configuring the support and base);

vertically displacing the support by pneumatically powered actuators to lift the support off the pins, the vertically displacing comprising lifting both ends of the support substantially simultaneously and substantially in unison;

while the board is over the support upper planar surface, cutting the board to separate the integrated circuit packages from one another;

Thus, the claim 24 of the patent has all the limitations of claim 1 with the exception of explicitly claiming: providing each actuator of the pair with release valves to equilibrate a back-pressure to ambient during lifting of the support;

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to interpret the claimed "outlet lines" in the limitation, "maintaining a substantially equal gas pressure comprises equilibrating gas in the outlet lines with ambient pressure during the lifting," as release valves.

Therefore, claim 24 of the patent has all the limitations of claim 1.

With respect to claim 4, claim 24 of the patent has the limitations set forth in claim 1 above, wherein the vertically displacing the support comprises forcing gas into the actuators.

With respect to claim 5, claim 24 of the patent has the limitations set forth in claim 1, including wherein the substantially simultaneously and substantially in unison lifting of the ends of the support comprising forcing the gas into the individual actuators substantially simultaneously, and maintaining a substantially equal gas pressure at both actuators during the lifting.

With respect to claim 6, claim 24 of the patent has the limitations set forth in claims 1 and 5 above, wherein the maintaining a substantially equal gas pressure comprises equilibrating gas, through outlet lines of the individual actuators with ambient during the lifting.

With respect to claim 8, claim 24 of the patent has the following limitations:

A method for forming (separating) integrated circuit packages from a board having a plurality of integrated circuits, comprising:

providing a base having a plurality of pins extending upwardly therefrom;

providing a support over the base, the support having a plurality of holes extending there-through, the pins extending through the holes;

vertically displacing the support by pneumatically powered actuators to lift the support off the pins, the vertically displacing comprising lifting both ends of the support substantially simultaneously and substantially in unison;

while the board is over the support upper planar surface, cutting the board to separate the integrated circuit packages from one another;

Thus, the claim 24 of the patent has all the limitations of claim 8 with the exception of explicitly claiming: providing each actuator of the pair with release valves to equilibrate a back-pressure to ambient during lifting of the support;

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to interpret the claimed "outlet lines" in the limitation, "maintaining a substantially equal gas pressure comprises equilibrating gas in the outlet lines with ambient pressure during the lifting," as release valves.

Therefore, claim 24 of the patent has all the limitations of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (AAPA), in view of Lodewegen et al. (5,765,337, cited by applicant).

With respect to claims 1 and 8, AAPA teaches an integrated circuit package separator method (fig. 1, prior art) for separating integrated circuit packages (14) from a board (10) having a plurality of integrated circuits (12), comprising:

providing a base (48) having a plurality of pins (60) extending upwardly therefrom;

providing a support (50) over the base, the support having a plurality of holes (62) extending therethrough;

the pins extending through the plurality of holes (19) formed in the board and upwardly beyond an upper surface of the support;

configuring the support and the base such that the plurality of pins extend into the holes in the board when the board is placed over the upper surface of the support (col. 2, Ins. 14-27; Background of the Invention); and

separating the integrated circuit packages from one another when the board is over the upper surface of the support (col. 2, Ins. 28-36; Background of the Invention).

Thus, AAPA discloses all the limitations of the claims with the exception of explicitly disclosing:

vertically displacing the support off the pins using a pair of pneumatic actuators such that individual actuators of the pair lift respective opposing ends of the support substantially simultaneously and in unison;

providing each actuator of the pair with release valves to equilibrate a back-pressure to ambient during lifting of the support;

However, Lodewegen teaches vertically displacing a stack of articles using a pair of pneumatic actuators (rods of member 42) such that individual actuators of the pair lift respective opposing ends of the support substantially simultaneously and in unison. Lodewegen further discloses providing each actuator with release valves to equilibrate a back-pressure to ambient during lifting of the support (col. 6, lns. 23-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of AAPA to include a pair of pneumatic actuators to lift the opposing of the support substantially simultaneously and in unison, using release valves to equilibrate a back pressure to ambient during lifting of the support, as taught by Lodewegen, for the intended purpose of improving the efficiency at which the support member is displaced.

With respect to claims 2-3 and 9-10, AAPA discloses that each of individual packages (14) comprises a pair of holes (19) and is thereby retained to the support by a pair of pins (60), which encompasses the limitations "at least one pin" of claims 3 and 9, and "at least two pins of" claims 4 and 10. Furthermore, AAPA discloses the vertically

displacing including releasing the separated integrated circuit packages from the pins (col. 2, Ins. 14-37; Background of the Invention).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Lodewegen ('337, cited by applicant) as applied to claim 1 above, and further in view of Abrahamson et al. (5,984,293).

With respect to claim 7, AAPA and Lodewegen disclose a package separator as set forth above in claim 1, with the exception of disclosing: wherein the vertically displacing comprises selectively flowing fluid from an external source into one or more ports of each actuator to selectively control displacement of the respective opposing ends of the support.

However, Abrahamson teaches a PCB holder (fig. 5) in which the vertical displacing comprises selectively flowing fluid (340) from an external source (350) into one or more ports (35) of each actuator (34) to selectively control displacement of the respective opposing ends of the support (50) (col. 6, Ins. 44-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the package separator of AAPA and Lodewegen to have the vertical displacing comprise of selectively flowing fluid into the ports of each actuator, as taught by Abrahamson, for the intended purpose of having an incompressible locking mechanism between the fluid and valve, thus providing stability to the support member holding the integrated circuit board.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abul Kalam whose telephone number is 571-272-8346. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AK
March 3, 2006


HOAI PHAM
PRIMARY EXAMINER